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Planting Seeds

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Report Highlights:
Planting seed imports will decline through MY02/03 as Philippine agriculture braces for the El Nino dry spell and planting activities abate. Beyond MY02/03, however, seed imports will surge enhanced by the pending passage of a plant variety protection law as well as the recent approval of GMO commercialization guidelines.

Includes PSD changes: No
Includes Trade Matrix: No
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Executive Summary

The performance of Philippine agriculture, particularly of the crops subsector, continues to be largely determined by the weather. The predicted occurrence of another El Nino dry spell in the last quarter of 2001 will result in the decline in planting seed imports in MY01/02 as dry growing conditions will discourage planting activities. Effects of the weather disturbance, however, did not materialize and are now predicted to occur in the last quarter of this year. The coming El Nino will be milder compared to the 1997 episode according to local weather forecasters, but is expected to be longer in duration possibly extending to the first half of CY2003. As a result, the decline in planting seed imports will likely extend through MY02/03.

Beyond MY02/03, however, planting seed imports are expected to surge as the GOP aggressively pursues its agricultural modernization program which emphasizes the use of modern agricultural technologies including superior planting seeds. Though the use of home-saved seeds remain to be the dominant seed practice, the use of quality seeds is expected to gradually increase in the next 3 to 5 years. Increased seed imports will be complemented by the impending enactment of a plant variety protection law as well as the approved guidelines for GMO commercialization that includes propagation as well as importation.

Marketing

Philippine GDP last year grew 3.4 percent according to the National Economic and Development Authority (NEDA) fueled mainly by agriculture's 4 percent expansion. All agricultural sub-sectors registered positive growth rates last year with the crop's sub-sector growing by 2.58 percent from its previous year's level (see Table 1 and 2). The crops sub-sector accounts for about half of total agricultural output. Despite the slowdown of the global economy, GDP in 2002 is projected to grow by 4.0 to 4.5 percent with agriculture expected to grow at a slower 2.7 to 3.7 percent.

Rice, the main crop grown in the Philippines is harvested from an annual average area of 4 million hectares. According to Dr. Frisco M. Malabanan, Program Director of the rice program of the Department of Agriculture (DA), rice contributes an average of 16.5 percent of the country's gross value-added (GVA) in agriculture, 13 percent to the consumer price index, 3.5 percent to GDP and 3.3 percent to GNP. The majority of rice is harvested in the fourth quarter of each year.

For three consecutive years rice production has reached record levels due to favorable weather conditions as well as increased use of certified seeds. Last year, rice production reached a record 12.95 MMT of paddy rice harvested, up from 12.39 MMT in 2000. Average yields increased by 8 percent from 3.07 tons per hectare in 2000 to 3.19 tons per hectare last year. In 2000, around 669,200 hectares or roughly 17 percent of total area planted to rice used certified seeds. Last year, certified and hybrid seeds were planted to around 1,547,000 hectares or 38 percent of total area planted with rice. Data on the percentage specific to hybrid rice area planted and/or certified seeds, however, is unavailable. Certified seeds reportedly can increase yields to 4.27 MT per hectare while hybrid seeds can increase harvests to 7 or 8 MT per hectare. Local rice farmers traditionally have yields around only 3 MT a hectare using home saved seeds and most of them use 3 to 4 cavans or 120 to 160 kg. of rice seeds per hectare. They believe the more

seeds they plant the higher the yield. Research from the Philippine Rice Research Institute (PhilRice), however, reportedly show that a bag of 40kg. certified rice seeds is enough for one hectare. Despite the recent production gains, the country still had to import significant volumes of rice to satisfy demand of a rapidly growing population.

For this year, under the DA's Ginintuang Masaganang Ani (GMA) Rice Program, a paddy rice output of 13.33 MMT is being targeted using both certified and hybrid seed technologies, among others. For inbred or certified rice seeds, it aims to achieve an estimated 60 percent utilization rate this year. The program undertakes the production and distribution of breeder, foundation and registered seeds to the National Rice Seed Production Network (SeedNet) as well as local growers. It procures certified seeds from seed growers and distributes them to selected farmers in irrigated and rain-fed areas. The program aims to attain an 80 and 30 percent certified seed utilization rate in irrigated and rainfed areas, respectively, in four years time. The government will subsidize 50 percent of the cost.

For rice hybrids, the program is guided by Administrative Order No. 25 (AO 25) or the GOP's Rice Hybrid Program which was approved and signed last December 2001. The program aims to intensify hybrid rice use through 2004 (refer to RP2009) and attain rice self sufficiency by that time. AO 25 aims to cultivate hybrid rice in 135,000 hectares of hybrid rice this year, 200,000 hectares in 2003, and 300,000 hectares in 2004. This translates to a hybrid rice seed requirement of 2,700 MT this year, 4,000 MT in 2003, and 6,000 MT in 2004. The hybrid rice varieties were developed by the International Rice Research Institute (IRRI) and the PHILRICE and will be mass produced by private and public institutions. PHILRICE is the primary government agency responsible for the hybrid rice program and the promotion of the utilization of hybrid rice technology (refer to RP2015). To ensure attainment of the program targets, the DA will allocate and realign P450 million from its Agricultural and Fisheries Modernization Act (AFMA) budget as funding support for the program.

Corn, the next major crop to rice, is grown in around 2.7 million hectares mostly found in Mindanao island. The major crop is harvested in the third quarter annually accounting for roughly 40 percent of total national production. According to the Philippine Corn Research Institute (PhilCorn), the national average yield is a very low 1.05 MT per hectare for white corn and 1.63 MT per hectare for yellow corn. The majority of corn farmers commonly still use low yielding open pollinated varieties (OPV's) and the use of hybrids are confined to yellow corn grown mostly in suitable areas. The DA currently has a program to promote hybrid corn which has the potential to reach a yield of 10 to 12 MT per hectare. Financing for planting hybrid corn is from the Quedan and Rural Credit Guarantee Corp.

Yellow corn is mainly used for animal feed production while white corn is used for both food and feed purposes. Roughly 2.5 million Filipinos prefer white corn over rice as their food staple. However, since yellow corn production is usually inadequate, white corn is also mixed with yellow corn in feed production. The low corn yields and consequently low production result in an estimated corn shortfall of between 800,000 and 1,000,000 MT annually as a result of strong feed demand by a growing livestock, poultry and aquaculture sub-sectors. Expanding feed demand coupled with stagnant corn production have forced local feedmills, hog and poultry farmers, as well as fishpond raisers to fill the gap by buying imported corn and other substitutes like wheat, sorghum, etc.

The Philippine Corn Research Institute (PhilCorn) was created last January 2001 by virtue of DA Administrative Order No. 5 (AO 5). PhilCorn is mandated to develop a national corn research development and extension program and generate technologies to modernize the corn industry. PhilCorn implements its programs in collaboration with 12 DA Research Stations and 4 Experimental Research Farms of the state Colleges and Universities. Funding, though is a

problem.

The recent approval of GMO commercialization guidelines (see RP2018) will result in Bt corn seed sales within a year (see Biotechnology, POLICY). The two US companies involved in Bt corn field testing estimate potential sales of $3 million within three years as a result of the approved guidelines. The guidelines also ensure continued access for an estimated $400 million of US commodities and products containing GMOs.

For vegetables, the Philippine has one of the lowest, if not the lowest, per capita vegetable consumption level in the region. The average Filipino consumes annually only 39 kilos of vegetables compared to around 60 kilos in other ASEAN countries and is largely due to low vegetable yields. Dr. Mary Ann Sayoc, General Manager of the East-West Seed Corp., attributes the low vegetable output to the dominant practice of using "home saved" seeds from a previous crop for the next cropping which has resulted in varietal deterioration.

The domestic vegetable seed industry is still considered in its infancy stage. Vegetable seeds in the Philippines are considered a commodity and not as a quality product. It is not given much attention. In contrast to rice and corn, the top 2 major crops in the Philippines, there is no long term plan for vegetable production in the country. Planning for the vegetable seed industry is difficult and the design of a national program for vegetables hampered by the lack of accurate information/data vis-a-vis the seed situation in the country. This is further compounded by extension inadequacies due to existing organizational gaps. In 1991, as part of the GOP's decentralization efforts, about 70, 000 extension workers were devolved to the local government units (LGU's) making national programs more difficult to implement.

Vegetable seed supply in the Philippines mainly comes from private seed companies that farm- out seed production to selected growers/farmers. Only a small amount comes from government experimental and research stations such as those under the Bureau of Plant Industry (BPI). A considerable amount of quality seeds comes from seed importation. Government research agencies come out with only 1-2 vegetable hybrids from time to time and hybrid or variety development of vegetables is largely done by the private sector. Varietal development, however, is slowed down by inadequate protection afforded the plant breeder in the absence of a plant variety protection law. Enactment of the law is, however, expected shortly (see POLICY, Plant Variety Protection).

Seed testing and certification is the responsibility of the National Seed Quality Control Services (NSQCS) under the BPI. It administers and operates 17 laboratories most of which are old and dilapidated. Seed standards are set by the government but the seed companies are responsible that they are met.

While the use of quality planting seeds will definitely raise crop production in the Philippines, it should be noted that crop production will even be higher if the use of quality seeds are complemented by the proper cultural farming practices. The application of appropriate fertilizers and other inputs such as irrigation are often not made as a result of financial constraints by subsistence farmers. This is why credit plays a key role in raising productivity.

For the first quarter of 2002, Philippine agriculture expanded 3.8 percent exceeding the GOP's 3.5 percent growth target for the period. Crop production rose 3 percent from the previous year despite the contraction in coconuts, pineapples and coffee production. According to Agriculture Secretary Leonardo Q. Montemayor, the growth is the result of favorable weather and increased public and private spending on infrastructure, production and easier access to credit. Production for the first quarter reportedly represents 15 to 20 percent of the total agricultural production for the year while the majority of the harvest or some 50 percent comes in the last quarter of each year.

The expected slow down of agriculture's growth this year is premised on the occurrence of an El Nino weather disturbance starting the second semester of CY2002. Originally predicted to occur late last year, it failed to materialize and on the contrary, better-than-normal weather conditions prevailed as evidenced by the good performance of overall agricultural crops last year. The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), in its latest forecast, predicts the El Nino dry spell to be manifest in the last quarter of this year. Although predicted to be milder than the 1997 episode, the PAGASA forecasts this year's El Nino to have a longer duration possibly lasting through the first semester of 2003. This will discourage planting activities and the use of planting seeds in MY02/03.

Policy

General

In her first State of the Nation Address (SONA), President Gloria Macapagal-Arroyo gave emphasis to agricultural modernization in relation to alleviating the poverty situation of the country (refer to RP1035). According to the President, "There can be a million new jobs in agriculture and fisheries. Within the year, the Department of Agriculture (DA) shall begin to implement the program to generate them." The President was referring to the AFMA of 1997 (refer to RP9001) whose implementation has been delayed.

The AFMA is a national agricultural development program that has as a policy the pursuit of self-sufficiency in the country's staples, namely rice and white corn. It recognizes and underscores the significant role of research and development in agricultural modernization. Section 80 under Chapter 1 covering Research and Development of the AFMA reads as follows:

Section 80. *Declaration of Policy. - It is hereby declared the policy of the State to promote science and technology as essential for national development and progress.*
The State shall likewise give priority to research and development, invention, innovation, and their utilization and to science and technology education, training, and services. In addition to appropriate and relevant technology, the State shall support indigenous and self-reliant scientific and technological capabilities, and their application to the country's productive system and national life.

The GOP reportedly has earmarked some P25.88 billion ($507.45 million) this year for the AFMA, higher by P1.67 billion ($32.75 million) from the P24.21 billion ($474.71 million) spent for the same purpose in 2001. Last year, around P1.04 billion ($20.39 million) was spent to support research and development programs including providing 72 degree and 108 non-degree scholarships. The majority or P9.17 billion ($179.80 million) was spent on credit extension to farmers in 2001.

Biotechnology

Despite the vigorous and sometimes radical efforts by opposing groups, the Philippines became the first country in Southeast Asia with GMO commercialization guidelines in place (refer to RP2018). Last April 3, 2002, Agriculture Secretary Leonardo Q. Montemayor signed DA Administrative Order No. 8 (AO 8) or the "Rules and Regulations for

the Importation and Release into the Environment of Plants and Plant Products Derived from the Use of Modern Biotechnology" after three years of debate and intense lobbying. AO 8 outlines and institutionalizes the regulatory framework for GMO commercialization including propagation and importation of GM crops for direct food or feed use and processing.

AO 8 makes possible the finalization of field testing and the commercial sale of Bt corn seed within the next year. The approval is the result sustained and combined efforts by many people and organizations. The FAS role included sustained interaction with decision-makers; support for numerous seminars and educational events; and, Cochran programs for Philippine biotech policy makers and regulators, all of which greatly enhanced understanding of the technology and the US position.

AO 8 provides for a transition period wherein the new procedures take effect on June 30, 2003. Implementation of these guidelines will fall to four regulatory agencies under the DA. The lead agency will be the BPI. With lesser but still critical roles are the Bureau of Animal Industry (BAI), the Bureau of Agriculture and Fisheries Product Standards (BAFPS), and the Fertilizer and Pesticide Authority (FPA). Just recently, the four agencies participated in a workshop to formulate agency-specific protocols in biosafety, food and feed safety and ecological management of GM crops. Post will support efforts by the BPI in implementing AO 8 by way of assisting in its training needs assessment. This is expected to enhance the development of the appropriate training of its regulatory agencies.

Meanwhile, Monsanto Philippines Inc. (MPI) has recorded an average of 9 MT per hectare for Bt corn during the dry season, higher by more than 1 MT than the 7.0 to 7.8 MT yield of MPI's hybrid corn and higher by 5 to 7 MT compared to the open pollinated corn breed. Bt corn field tests during the wet season have shown a 40 percent yield increase compared to traditional varieties (refer to RP1064). The wet season produced a lower harvest of an average of 7 MT per hectare.

Plant Variety Protection

The country still has no plant variety protection (PVP) law in place and is on the Priority Watchlist of the USTR in its annual "Special 301" report. Recent legislative developments, however, reveal that a PVP law will soon be in place.

Senate Bill No. 1865 (SBN 1865) entitled "An Act to Provide Protection To New Plant Varieties, Establishing a National Plant Variety Protection Board and for Other Reasons" was approved on third reading last March 11, 2002. SBN 1865 was prepared and submitted jointly by the Committees on Agriculture and Food; Ways and Means; and Finance with Senators Manuel B. Villar, Jr., Juan M. Flavier and Serge R. Osmena III as authors.

A similar bill, House Bill 4518 or "An Act to Provide Protection To New Plant Varieties, Establishing a National Plant Variety Protection Board and for Other Purposes", was likewise approved on third reading by the Philippine House of Representatives last May 14, 2002. HB 4518 provides legal protection to plant breeders through, among others, the grant of 'Patent' in the form of a "Certificate of Plant Variety Protection' (CPVP) to any new plant variety discovered or developed. According to Rep. Alfredo G. Maranon, Jr., chairman of the House Committee on Agriculture and sponsor of HB 4518, the bill is a consolidated version of three bills filed by Reps. J.R. Nereus O. Acosta and Constantino Jaraula (HB 202), Cynthia A. Villar (HB 721) and Carlos O. Cojuangco (HB 815). Reps. Maranon and Rolando Andaya led the sponsors (Committees on Agriculture and Appropriations) in defending the bill during the plenary debates until its second reading approval last April 17, 2002.

The main difference, and the most contentious, between the two PVP bills, cover exceptions to plant variety protection. While the House version is UPOV 1991 consistent, the Senate version has a section (Section 43. Covering Exceptions to Plant Variety Protection) which allows "The traditional right of small farmers to save, use, exchange, share or sell their farm produce of a variety protected under this Act, except where a sale is for the purpose of reproduction under a commercial marketing agreement subject to the conditions to be determined by the Board." As expected, industry finds the Senate version objectionable because of this.

The respective bicameral conference panels of the Senate and the House met last May 23, 2002 and agreed on a single version and according to Post contacts, the consolidated bill resembles the Senate version more in relation to the traditional rights of farmers to sell the seeds. The consolidated bill was ratified by the Senate May 30, 2002. Ratification by the Lower House is expected soon. Congress, however, will take a recess starting June 7, 2002 and will resume on July 21, 2002.

Trade

Planting seed imports in MY00/01 increased by a considerable 51 percent from the previous year's level, contrary to what was predicted in the previous annual report due to favorable weather conditions (refer to RP1027). Australia dominated seed imports during the year with a 41 percent share of overall seed imports. China and the U.S. were the next two largest seed suppliers with similar market shares of 19 percent. Vegetable seeds dominated seed imports during the year.

Anticipating the dry spell brought by the El Nino weather disturbance, seed imports dropped by a significant 80 percent in the second semester of 2001 compared to the same period the previous market year. Imports during the period traditionally account for the majority of seeds imported annually. From 1996 to 2000, seed imports averaged 994,000 kgs. during the second half of each calendar year. Because of this, seed imports are expected to decline from its previous year in MY01/02 as indicated by the January to December 2001 import level in Table below.

Import Trade Matrix (Kgs)					
Country	Philippines				
Commodity	Planting Seeds				
Time period	Jul-Jun		Jul-Jun		Jul-Dec
	1999/00		2000/01		2001
U.S.	112,115	U.S.	453,382	U.S.	96,467
Others					
China	634,602	Australia	946,930	India	63,772
Thailand	294,709	China	454,194	Indonesia	41,000
Pakistan	84,050	India	113,914	Hongkong	26,230
Japan	69,542	Hongkong	89,174	Japan	24,268
Australia	65,170	Japan	60,500	New Zealand	15,670
Hongkong	59,251	Myanmar	45,180	South Africa	14,867
India	37,132	Thailand	33,045	Korea	11,968

New Zealand	42,884	Belgium	26,520	Thailand	3,912
Netherlands	29,453	Netherlands	21,247	PNG	800
Indonesia	20,667	Indonesia	21,000	Australia	565
Total for Others	1,337,460		1,811,704		203,052
Others not Listed	101,612		71,041		3,226
Grand Total	1,551,187		2,336,127		302,745

Source of Data: National Statistics Office

Should the El Nino dry spell materialize as predicted, the majority of MY02/03 will be characterized by scarcity of rains and water for irrigation. As a result, planting activities are expected to decline significantly and consequently seed imports will fall during the year.

Beyond MY02/03, planting seed imports are expected to surge and prospects for increased U.S. planting seed imports become very positive as the GOP pursues its modernization program with special emphasis on the special role of R & D in the agricultural development process. Recent, as well as expected policy developments, such as the effectivity of GMO commercialization guidelines in June 2003 and the passage into law of a plant variety protection bill this year will enhance these prospects significantly.

Planting seed exports in MY01/02, on the other hand, will likely surpass its previous year's level as indicated by the July to December 2001 export volume as well as the growth of the crops subsector in the first half of this year. Exports in the July to December 2001 period has already reached 61 percent of the total volume exported the previous market year. China will likely be the dominant destination of seed exports followed by Malaysia and Singapore. Like imports, seed exports in MY02/03 are also expected to decline from its year-ago level as the El Nino dry spell will likely constrain seed production activities.

Planting Seed Export Table

Export Trade Matrix (kgs)					
Country	Philippines				
Commodity	Planting Seeds				
Time period	Jul-Jun		Jul-Jun		Jul-Dec
	1999/00		2000/01		2001
U.S.	4,187	U.S.	55 570	U.S.	
Others					
Malaysia	304,100	Malaysia	145,241	China	99,950
Singapore	60,120	Singapore	110,976	Malaysia	41803
Japan	27,768	Japan	31,013	Singapore	30,440
Taiwan	27,360	Sabah	28,000	Belgium	20,000

Bangladesh	9,000	Hongkong	12,688	Japan	8,736
Vietnam	2,000	Netherlands	949	Thailand	676
Indonesia	1,070	Indonesia	332	Indonesia	650
Hongkong	380	Costa Rica	299	India	292
Korea	286	Hawaii	286	Vietnam	100
TTP	156	Turkey	137		
Total for Others	432,240		329,921		202,647
Others not Listed	363		49		
Grand Total	436,790		330,540		202,647

Source of Data: National Statistics Office

Tariffs

Except for rice, effective tariffs and other charges for planting seed imports including qualified exemptions from such remain unchanged from the previous annual report (RP1027). Rice in the husk used for sowing (HS1006.10 10) may now be imported duty-free by virtue of Executive Order No. 91 (EO 91). EO 91 took effect last April 21, 2002 (refer to RP2035). Previous to this, the Tariff and Customs Code of the Philippines did not distinguish paddy rice used for sowing or for milling.

Table1. Value of Production in Agriculture, at constant prices, 1999 -2001

	In Million Pesos			Percent Change	
Sub-Sector	1999	2000	2002001	99/00	00/01
AGRICULTURAL CROPS	136,911	141,674	145,333	3.48	2.58
MAJOR CROPS	106,866	111,105	114,770	3.97	3.30
Palay	38,778	40,761	42,622	5.11	4.56
Corn	20,860	20,526	20,589	-1.60	0.31
Coconut	18,334	19,622	19,953	7.02	1.69
Sugarcane	7,611	8,224	9,036	8.06	9.88
Banana	8,181	8,824	9,059	7.85	2.66
Pineapple	2,831	2,820	2,908	-0.38	3.11
Coffee	2,723	2,914	3,011	7.02	3.32
Mango	6,297	6,167	6,429	-2.06	4.24
Tobacco	778	748	705	-3.96	-5.74
Abaca	472	499	459	5.62	-7.93
OTHER CROPS	30,045	30,569	30,563	1.74	-0.02
Peanut	220	227	221	3.22	-2.44
Mongo	343	323	326	-5.80	0.91
Cassava	2,665	2,490	2,329	-6.59	-6.44
Camote	1,059	1,053	1,036	-0.61	-1.55
Tomato	516	526	518	1.89	-1.40
Garlic	433	634	709	46.58	11.83
Onion	532	527	517	-0.88	-1.91
Cabbage	404	405	414	0.13	2.23
Eggplant	762	793	810	4.01	2.20
Calamansi	908	922	928	1.59	0.61
Rubber	974	982	1,008	0.79	2.71
Other Fibercrops	33	22	24	-33.78	6.91
Others	21,196	21,666	21,722	2.22	0.26

Source: Bureau of Agricultural Statistics

Table 2. Volume of Production, 1999 - 2001					
Sub-Sector	In Thousand Metric Tons P			Percent Change	
AGRICULTURAL CROPS	1999	2000	2001	99/00	00/01
MAJOR CROPS					
Palay	11,787	12,389	12,955	5.11	4.56
Corn	4,585	4,511	4,525	-1.60	0.31
Coconut	12,142	12,995	13,214	7.02	1.69
Sugarcane	23,783	25,700	28,238	8.06	9.88
Banana	4,571	4,930	5,061	7.85	2.66
Pineapple	1,530	1,525	1,572	-0.38	3.11
Coffee	117	126	130	7.02	3.32
Mango	866	848	884	-2.06	4.24
Tobacco	52	49	47	-3.96	-5.74
Abaca	73	77	71	5.62	-7.93
OTHER CROPS					
Peanut	26	27	26	3.22	-2.44
Mongo	29	27	28	-5.80	0.91
Cassava	1,890	1,768	1,652	-6.49	-6.54
Camote	557	554	545	-0.61	-1.55
Tomato	145	148	146	1.88	-1.40
Garlic	9	14	15	46.57	11.83
Onion	85	84	83	-0.88	-1.91
Cabbage	87	88	90	0.13	2.23
Eggplant	160	166	170	4.01	2.20
Calamansi	178	181	182	1.59	0.61
Rubber	215	216	222	0.79	2.71
Other Fibercrops	7	4	5	-33.79	6.93
Others	7,909	8,084	8,105	2.22	0.26

Source: Bureau of Agricultural Statistics